

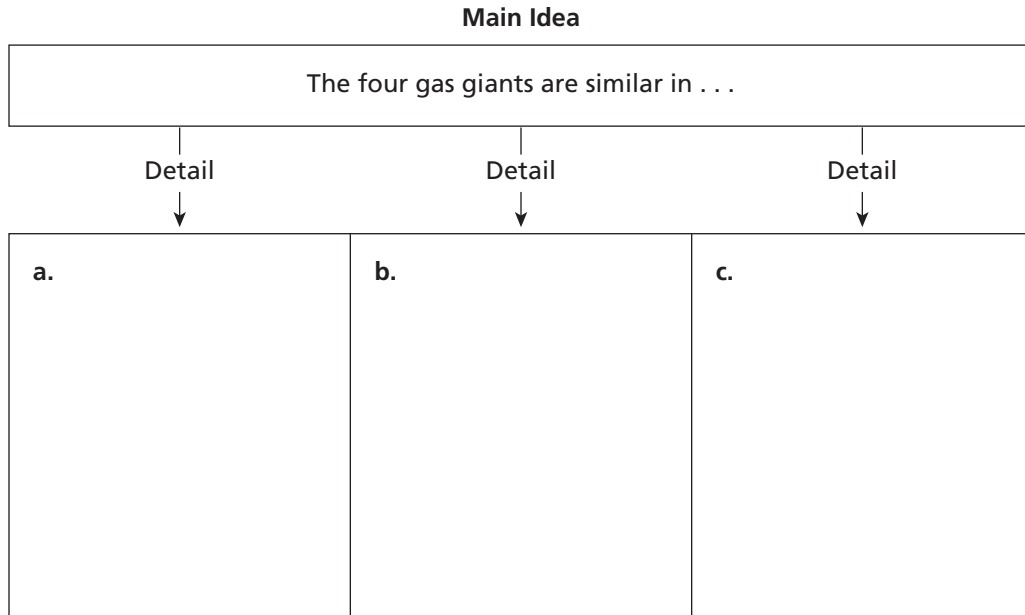
The Solar System ▪ *Guided Reading and Study*

The Outer Planets

This section describes the main characteristics of the five planets farthest from the sun. It also explains how Pluto is different from the other planets.

Use Target Reading Skills

As you read about the similarities among the gas giants, fill in the detail boxes that explain the main idea in the graphic organizer below.



Gas Giants and Pluto

1. The first four outer planets do not have solid _____.

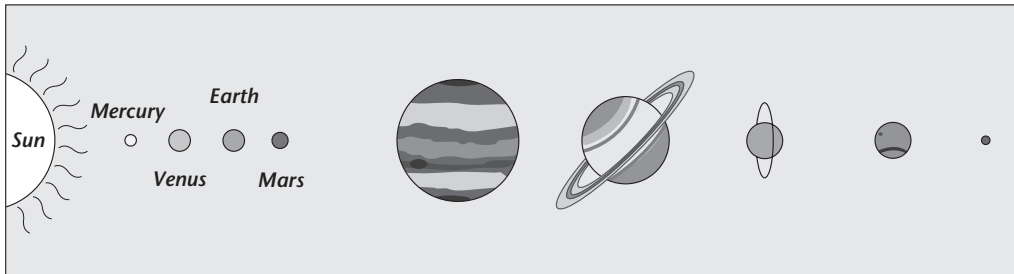
2. Which four planets are known as the gas giants?

3. What is the composition of the gas giants?

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The Outer Planets *(continued)*

4. The drawing below shows the sun, the four inner planets, and the five outer planets. Label the outer planets according to their typical place in the solar system.



5. Describe the composition of the rings that surround the gas giants.

Jupiter

6. Is the following sentence true or false? Jupiter is the most massive planet in the solar system. _____
7. What is the Great Red Spot on Jupiter?

8. Circle the letter of each sentence that is true about Jupiter.
- a. Jupiter has a dense core of hydrogen and helium.
 - b. Jupiter's atmosphere is extremely thin.
 - c. Jupiter has dozens of moons revolving around it.
 - d. Many of Jupiter's moons have been discovered in recent years.

9. What are Jupiter's four largest moons?

a. _____ b. _____

c. _____ d. _____

10. Jupiter's moon Io is covered with active _____.

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The Outer Planets *(continued)*

Saturn

11. What are Saturn's rings made of?

12. Is the following sentence true or false? Saturn has only a few thin rings.

13. The largest of Saturn's moons is called _____.

Uranus

14. Why does Uranus look blue-green?

15. How much larger is Uranus than Earth?

16. What discovery made astronomer William Herschel famous?

17. How is the rotation of Uranus unlike that of most of the other planets?

18. What are Uranus's five largest moons like?

19. Which spacecraft sent many images of Uranus back to Earth?

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The Outer Planets *(continued)*

Neptune

20. Is the following sentence true or false? Neptune's atmosphere is blue and has no clouds. _____
21. In the 1800s, how did astronomers predict that the planet Neptune would be discovered before anyone had seen it?
- _____
- _____
- _____
22. Circle the letter of the sentence that explains how the Great Dark Spot was like the Great Red Spot.
- a. Both formed from volcanoes.
 - b. Both formed on rings.
 - c. Both were probably storms.
 - d. Neither lasted long.
23. Which is the largest of Neptune's moons? _____

Pluto

24. Is the following sentence true or false? Pluto is smaller than Earth's moon. _____
25. How often does Pluto revolve around the sun?
- _____
- _____
26. Circle the letter of each sentence that is true about Pluto.
- a. Its moon is more than half Pluto's size.
 - b. Pluto has a gaseous surface.
 - c. Some astronomers consider Pluto and Charon to be a double planet.
 - d. Pluto is sometimes closer to the sun than Neptune.
27. Why do some astronomers think Pluto should not be called a planet?
- _____
- _____
- _____
- _____